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EXAMINER

CHAI, LONGBIT

| ART UNIT | PAPER NUMBER |
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2131

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,413

Applicant(s)

CROWCROFT ET AL.

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59,61-66 and 71-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59,61-66 and 71-80 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 – 59, 61 – 66 and 71 – 80 have been presented for examination.

Claim Objections

2. Claim 11 is objected to because of the following informalities: (a) "are is monitored" should be "is monitored", and (b) "in dependent upon" should be "is dependent upon". Appropriate correction is required, which also includes the similar errors recited in the rest of claim limitations but not resented herein

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the claim language "selecting one of said watermarked versions for each segment for each one of the multiple different copies to be generated to generate a sequence of differently watermarked segments which is different for each copy" set forth is unclear especially (a) What is exactly each of the copy is referred to, and (b) the claim language "for each segment for each one of the

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multiple different copies to be generated” is generally narrative and indefinite, failing to conform with current U.S. practice with grammatical and idiomatic errors.

Any other claims not addressed are rejected by virtue of their dependency should also be corrected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 3, 16 – 20, 33 – 53, 55 – 58, 61 – 63, 65, 71 – 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura (Patent Number: 6425081), in view of Levine (Patent Number: 6209094).

As per claim 1 and 18, Levine teaches a method of watermarking an information signal to generate multiple different watermarked copies of the information signal, the method comprising:

generating a plurality of differently watermarked versions of each information segment (Iwamura: see for example, Figure 1: a plurality of differently watermarked versions based on different user information); and

selecting one of said watermarked versions for each segment for each one of the multiple different copies to be generated to generate a sequence of differently watermarked segments which is different for each copy (Iwamura: see for example, Figure 13 Element 20 and Column 10 Line 38 – 56);

Iwamura does not disclose expressly segmenting the information signal into information segments.

Levine teaches segmenting the information signal into information segments (Levine: for example, Abstract Line 5 – 6 and Line 12 – 13).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Levine within the system of Iwamura because Levine teaches providing a secure and robust watermark system by division of the basis signal into segments and encoding watermark data into each segment (Levine: see for example, Column 4 Line 51 – 54 and Column 2 Line 59 – 61).

As per claim 2 and 19, Iwamura as modified teaches the claimed invention as described above (see claim 1 and 18 respectively). Iwamura as modified further teaches the selecting is performed using information on the receiver of each copy such that the sequence of differently watermarked segments of each copy is dependent upon the receiver of the copy (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56).

As per claim 3 and 20, Iwamura as modified teaches the claimed invention as described above (see claim 2 and 19 respectively). Iwamura as modified further teaches the selecting is performed pseudo-randomly based on receiver identification information (Iwamura: see for example, Column 4 Line 54 – 56).

As per claim 16 and 33, Iwamura as modified teaches the claimed invention as described above (see claim 1 and 18 respectively). Iwamura as modified further teaches each watermarked version of each segment is watermarked using the same watermarking technique and is watermarked differently (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: using different receiver / user information).

As per claim 17 and 34, Iwamura as modified teaches the claimed invention as described above (see claim 1 and 18 respectively). Iwamura as modified further teaches each watermarked version of each segment is watermarked using one of a number of possible watermarking techniques (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56) & (Levine: for example, Abstract Line 5 – 6 and Line 12 – 13).

As per claim 35 and 43, claim 35 and 43 do not further teach over claim 1. Therefore, see same rationale addressed above in rejecting claim 1.

As per claim 36 and 44, Iwamura as modified teaches the claimed invention as described above (see claim 35 and 43 respectively). Iwamura as modified further teaches including interface means for connection to a nodes in a network, wherein receivers requiring a copy of the information signal are connected to nodes in the network and the nodes in the network select one of the watermarked versions for each segment for each receiver to generate a sequence of differently watermarked segments which is different for each receiver, the apparatus including. storage means for storing information on the receivers-and-information on the routes taken to transmit copies of respective receivers, wherein such interface is adapted to receiver said information over the network (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: (a) the network system using electronic watermark must have switching means and the received watermarked versions for each segment is embedded for the receiver the network system using electronic watermark must have switching means and the received watermarked versions for each segment is embedded for the receiver as taught by Iwamura (b) a plurality of differently watermarked versions based on different user ID information the network system using electronic watermark must have switching means and the received watermarked versions for each segment is embedded for the receiver as taught by Iwamura).

As per claim 37 and 45, Iwamura as modified teaches the claimed invention as described above (see claim 35 and 44 respectively). Iwamura as modified further teaches said watermarking means is adapted to store parameters used to watermark

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each version of each segment (Iwamura: see for example, Figure 1 & Figure 13

Element 20 and Column 10 Line 38 – 56: a plurality of differently watermarked versions based on different user ID information).

As per claim 38 and 46, Iwamura as modified teaches the claimed invention as described above (see claim 36 and 44 respectively). Iwamura as modified further teaches said interface means is adapted to receive from the network information indicating when a said receiver began to receive a copy of the information signal and to store the information in said storage means (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: a plurality of differently watermarked versions based on different user ID information).

As per claim 39 and 47, Iwamura as modified teaches the claimed invention as described above (see claim 36 and 44 respectively). Iwamura as modified further teaches said interface is adapted to receive information identifying the number of nodes in the network between the apparatus and each receiver, and said watermarking means is adapted to set the number of differently watermarked versions of each segment in dependence upon the largest number of nodes identified between the apparatus and a receiver (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: This applies when each node of the network is not only the destination receiver but also the router forwarding the data to another downstream receiver).

As per claim 40 and 48, Iwamura as modified teaches the claimed invention as described above (see claim 39 and 47 respectively). Iwamura as modified further teaches said storage means is adapted to store the number of versions of watermarking used for each segment (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56).

As per claim 41 and 49, Iwamura as modified teaches the claimed invention as described above (see claim 36 and 48 respectively). Iwamura as modified further teaches said storage means is adapted to store information identifying a storage location of the information signal or to store the information signal (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: the information signal is finally assembled and stored at the destined receiver).

As per claim 42 and 50, Iwamura as modified teaches the claimed invention as described above (see claim 35 and 43 respectively). Iwamura as modified further teaches including analysis means for receiving a copy of an information signal having a sequence of differently watermarked segments to be tested and for using the information in said storage means to calculate the sequence of differently watermarked segments for said receivers for comparison with the sequence of differently watermarked segments to be tested to determine if there is a match between at least a portion of the sequences (Levine: for example, Figure 19 Element 1904 and Column 19 Line 37 – 67).

As per claim 51 and 57, Iwamura teaches a watermarking apparatus, the apparatus comprising:

receiving means for receiving a plurality of differently watermarked versions of each of a plurality of information segments forming an information signal (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56);

However, Iwamura does not disclose expressly a plurality of information segments forming an information signal.

Levine teaches a plurality of information segments forming an information signal (Levine: for example, Abstract Line 5 – 6 and Line 12 – 13).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Levine within the system of Iwamura because Levine teaches providing a secure and robust watermark system by division of the basis signal into segments and encoding watermark data into each segment (Levine: see for example, Column 4 Line 51 – 54 and Column 2 Line 59 – 61).

Iwamura in view of Levine further teaches:

selecting means for selecting at least one watermarked version for each segment not to be transmitted on; and transmitting means for transmitting the or each remaining watermarked version for each segment over the network (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: This applies when each node of the network is not only the destination receiver but also the router forwarding the data to another downstream receiver).

As per claim 52, Iwamura as modified teaches the claimed invention as described above (see claim 51). Iwamura as modified further teaches said selecting means is adapted to use information on the position of the switch apparatus in the network to control the selection (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: selecting means is to select at least one watermarked version for each segment not to be transmitted on (according to claim 51) and is adapted to use information on the position of the switch apparatus in the network to control the selection – Examiner notes, when the switch position in the network is not only the destination receiver but also the router forwarding the data to another downstream receiver).

As per claim 53 and 58, Iwamura as modified teaches the claimed invention as described above (see claim 52 and 57 respectively). Iwamura as modified further teaches said selection means is adapted to use information on the route used for transmission to control the selection (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: Examiner notes, information on the route is used at the switch position in the network when the switch / router is not only the destination receiver but also the router forwarding the data to another downstream receiver).

As per claim 55 and 61, Iwamura as modified teaches the claimed invention as described above (see claim 52 and 58 respectively). Iwamura as modified further teaches selecting means includes a pseudo-random number generator and is adapted to carry out the selection pseudo-randomly, wherein the information is used as a key to initiate the pseudo-random number generator (Iwamura: see for example, Column 4 Line 54 – 56).

As per claim 56 and 62, Iwamura as modified teaches the claimed invention as described above (see claim 51 and 57 respectively). Iwamura as modified further teaches said receiving means is adapted to receive a message indicating the route the information signal will take, and said transmitting means is adapted to retransmit the message adding the identity of the apparatus in the route (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: “adding the identity of the apparatus in the route” – Examiner notes “the apparatus” is a watermarking apparatus according to claim 51 and thereby adding the identity of the receiver in the route is the identity of the user / receiver identity information embedded in the watermark as taught by Iwamura).

As per claim 63 and 65, Iwamura teaches a watermarking apparatus, the apparatus comprising:

receiving means for receiving the copy of the watermarked information signal comprising a sequence of differently watermarked segments (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56);

However, Iwamura does not disclose expressly a sequence of differently watermarked segments.

Levine teaches a sequence of differently watermarked segments (Levine: for example, Abstract Line 5 – 6 and Line 12 – 13).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Levine within the system of Iwamura because Levine teaches providing a secure and robust watermark system by division of the basis signal into segments and encoding watermark data into each segment (Levine: see for example, Column 4 Line 51 – 54 and Column 2 Line 59 – 61).

Iwamura in view of Levine further teaches:

storage means for storing information on receivers of copies of the information signal (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56);

accessing means for accessing the information signal (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56);

determining means for determining watermarked versions for segments for receivers using the accessed information signal and the information on the receivers (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56); and matching means for

matching the watermarks for segments for receivers with segments of the received copy of the watermarked information signal to identify the receiver of the copy of the watermarked information signal (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56).

As per claim 71 and 74, claim 71 and 74 are similar to the combination of claim 1 and claim 51. Therefore, see same rationale addressed above in rejecting both claim 1 and claim 51.

As per claim 72, 73, 75 and 76, claim 72, 73, 75 and 76 are similar to claim 2. Therefore, see same rationale addressed above in rejecting claim 2.

5. Claims 77 – 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura (Patent Number: 6425081), in view of Guedalia (Patent Number: 6148333).

As per claim 77, Iwamura teaches a watermarking method in a node of a network, comprising:

receiving a first communication including an information signal that is watermarked using first watermark information (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56); and

Iwamura further teaches forwarding a second communication to a receiver through the network, said second communication including said information signal that

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is watermarked using second watermark information (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56);

However, Iwamura does not disclose expressly wherein said second watermark information is based on characteristics of a route to said receiver.

Guedalia teaches wherein said second watermark information is based on characteristics of a route to said receiver (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of the receiver has an unique routing path – for example shortest path / route to the destination, and the switch / router is to forward the information downstream to the final receiver of the information signal based on the routing table maintained at the switch / router).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Guedalia within the system of Iwamura as modified because Guedalia teaches enhancing the security with authenticating policy by watermarking the image data based upon the IP user information (Guedalia: see for example, Column 10 Line 48 – 57).

Accordingly, Iwamura in view of Guedalia teaches forwarding a second communication to a receiver, said second communication including said information signal that is watermarked using second watermark information, wherein said second watermark information is based on characteristics of a route to said receiver.

As per claim 78, Iwamura as modified teaches the claimed invention as described above (see claim 77). Iwamura as modified further teaches said second watermark information is based on information unique to said node of said network (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of the receiver has an unique routing path – for example shortest path / route to the destination, and the switch / router is to forward the information downstream to the final receiver of the information signal based on the routing table maintained at the switch / router. Thereby, the unique destined receiver information is also corresponding to unique routing information of a said node in said network).

As per claim 79, Iwamura as modified teaches the claimed invention as described above (see claim 77). Iwamura as modified further teaches said second watermark information is dependent on said receiver (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56).

As per claim 80, Iwamura as modified teaches the claimed invention as described above (see claim 79). Iwamura as modified further teaches said second watermark information is based on an IP address at an interface to said receiver (Guedalia: see for example, Column 10 Line 48 – 57).

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6. Claims 4 – 15, 21 – 32, 54, 59, 64 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura (Patent Number: 6425081), in view of Levine (Patent Number: 6209094), and in view of Guedalia (Patent Number: 6148333).

As per claim 4 and 21, Iwamura as modified teaches the claimed invention as described above (see claim 2 and 19 respectively). Iwamura as modified does not disclose expressly the information on the receiver includes at least one of unique identification information for the receiver and information on the location of the receivers.

Guedalia teaches the information on the receiver includes at least one of unique identification information for the receiver and information on the location of the receivers (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Guedalia within the system of Iwamura as modified because Guedalia teaches enhancing the security with authenticating policy by watermarking the image data based upon the IP user information (Guedalia: see for example, Column 10 Line 48 – 57).

As per claim 5 and 22, Iwamura as modified teaches the claimed invention as described above (see claim 1 and 18 respectively). Iwamura as modified does not disclose expressly the copies of the information signal are transmitted to recipients over

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a network, and the selecting is performed in dependence upon the route taken for each copy to reach a respective recipient.

Guedalia teaches the copies of the information signal are transmitted to recipients over a network, and the selecting is performed in dependence upon the route taken for each copy to reach a respective recipient (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of the receiver has an unique routing path – for example shortest path / route to the destination).

Same rationale of combination applies here as above in rejecting the claim 4.

As per claim 6, 7, 23 and 24, Iwamura as modified teaches the claimed invention as described above (see claim 5, 6, 22 and 23 respectively). Iwamura as modified further teaches said network comprises a plurality of switching means for switching the route taken by information in said network, the generated plurality of differently watermarked versions of each information segment are generated at an information source, and input to said network, and said switching means carry out the selecting by selecting from received watermarked versions for each segments at least one watermarked version for each segment not to be transmitted on (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: This applies when each node of the network is not only the destination receiver but also the router forwarding the data to another downstream receiver).

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As per claim 8 and 25, Iwamura as modified teaches the claimed invention as described above (see claim 6 and 23 respectively). Iwamura as modified further teaches said switching means to which one or more recipients are connected selects one of the received watermarked versions for each segment which is the watermarked version for the segment to be transmitted to each recipient connected to the switching means (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: the network system using electronic watermark must have switching means and the received watermarked versions for each segment is embedded for the receiver as taught by Iwamura).

As per claim 9 and 26, Iwamura as modified teaches the claimed invention as described above (see claim 6 and 23 respectively). Iwamura as modified further teaches the number of differently watermarked versions of each segment generated is dependent upon the largest number of said switching means in a route between the source and a said recipient (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: a plurality of differently watermarked versions is based on different user information (i.e. receiver) and the network system using electronic watermark must have switching means and the received watermarked versions for each segment is embedded for the receiver as taught by Iwamura).

As per claim 10 and 27, Iwamura as modified teaches the claimed invention as described above (see claim 9 and 26 respectively). Iwamura as modified further

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teaches the number of differently watermarked versions of each segment is greater than the largest number of said switching means in a route between the source and a said recipient (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: the number of the switching means in a route between the source and a said recipient is one, which is the shortest path between the source and the destined receiver that is well known in the TCP/IP dynamic routing technique).

As per claim 11 and 28, Iwamura as modified teaches the claimed invention as described above (see claim 9 and 26 respectively). Iwamura as modified further teaches the number of said switching means in the routes from the source to the recipients is monitored and the number of differently watermarked versions of each segment varied is dependent upon the monitored number of said switching means (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: a plurality of differently watermarked versions based on different user information).

As per claim 12 and 29, Iwamura as modified teaches the claimed invention as described above (see claim 6 and 23 respectively). Iwamura as modified does not disclose expressly each said switching means which transmits to another said switching means makes the selection based on the position of the switching means in the route from the source to the recipients.

Guedalia teaches each said switching means which transmits to another said switching means makes the selection based on the position of the switching means in

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the route from the source to the recipients (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of the receiver has an unique routing path – for example shortest path / route to the destination).

Same rationale of combination applies here as above in rejecting the claim 4.

As per claim 13 and 30, Iwamura as modified teaches the claimed invention as described above (see claim 6 and 23 respectively). Iwamura as modified further teaches each said switching means which transmits to a recipient makes the selection based on unique identification information for the recipient (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: a plurality of differently watermarked versions based on different user ID information).

As per claim 14 and 31, Iwamura as modified teaches the claimed invention as described above (see claim 6 and 23 respectively). Iwamura as modified does not disclose expressly each said switching means transmits information on the position of the switching means in the route between the source and the recipients to said source.

Guedalia teaches each said switching means transmits information on the position of the switching means in the route between the source and the recipients to said source (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of the receiver has an unique routing path – for example shortest path / route to the destination).

Same rationale of combination applies here as above in rejecting the claim 4.

As per claim 15 and 32, Iwamura as modified teaches the claimed invention as described above (see claim 13 and 30 respectively). Iwamura as modified further teaches each switching means which transmits to a recipient receives information on the identity of the recipient from the recipient and transmits this to said source (Iwamura: see for example, Figure 1 & Figure 13 Element 20 and Column 10 Line 38 – 56: a plurality of differently watermarked versions based on different user ID information).

As per claim 54 and 59, Iwamura as modified teaches the claimed invention as described above (see claim 51 and 57 respectively). Iwamura as modified does not disclose expressly said selecting means is adapted to use information identifying a receiver to control the selection to select only one watermarked version for each segment to be transmitted on, wherein the receiver is the final receiver of the information signal, and said transmitting means is adapted to transmit the selected watermarked version for each segment to the receiver.

Guedalia teaches said selecting means is adapted to use information identifying a receiver to control the selection to select only one watermarked version for each segment to be transmitted on, wherein the receiver is the final receiver of the information signal, and said transmitting means is adapted to transmit the selected watermarked version for each segment to the receiver (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of

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the receiver has an unique routing path – for example shortest path / route to the destination, and the switch / router is to forward the information downstream to the final receiver of the information signal based on the routing table maintained at the switch / router).

Same rationale of combination applies here as above in rejecting the claim 4.

As per claim 64 and 66, Iwamura as modified teaches the claimed invention as described above (see claim 63 and 65 respectively). Iwamura as modified does not disclose expressly said storage means is adapted to store information on the nodes in a network forming the route between a source of the information signal and a receiver, and said determining means is adapted to determine the identity of the receivers using the route information.

Guedalia teaches said storage means is adapted to store information on the nodes in a network forming the route between a source of the information signal and a receiver, and said determining means is adapted to determine the identity of the receivers using the route information (Guedalia: see for example, Column 10 Line 30 – 31 and Column 10 Line 50 – 57: each different destination IP of the receiver has an unique routing path – for example shortest path / route to the destination, and the switch / router is to forward the information downstream to the final receiver of the information signal based on the routing table maintained at the switch / router).

Same rationale of combination applies here as above in rejecting the claim 4.

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. W. Richard Stevens "TCP/IP Illustrated, Volume 1 The Protocols" discloses Dynamic Routing Protocols in Chapter 10.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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